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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,335	10/09/2001	Barbara A. Soltz	P00594-US	6202

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EXAMINER

PHANIJPHAND, GWEN G

ART UNIT	PAPER NUMBER
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3731

DATE MAILED: 05/07/2003

2

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/973,335

Applicant(s)

SOLTZ ET AL.

Examiner

Gwen Phanijphand

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections – 35 U.S.C. 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,292,362 to Bass et al.

Regarding claim 1, Bass et al. disclose a method of bonding a first tissue to a second tissue (col. 4, ll. 11-16). The method comprises the steps of placing the first tissue in proximity of the second tissue; providing an adhesive in contact with the first and second tissues (col. 4, ll. 29-34); and exposing the adhesive to electromagnetic radiation (col. 4, ll. 16-19; col. 5, ll. 56-60). The adhesive includes a derivatized collagen liquid, gel, or solid (col. 4, ll. 53-67).

Regarding claim 2, Bass et al. disclose a method wherein the electromagnetic radiation includes infrared light (col. 5, ll. 56-60).

Regarding claim 3, Bass et al. disclose a method wherein the exposing step includes the step of directing light generated by a laser to the adhesive (col. 5, ll. 56-60, ll. 66-68; vol. 6, ll. 1-15).

Regarding claim 5, Bass et al. disclose a method further comprising the step of providing a material including cyanoacrylate in contact with at least one of the first and second tissues (col. 2, ll. 27-30: "isobutyl-2-cyanoacrylate").

Art Unit: 3731

2. Claims 1, 2 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,540,677 to Sinofsky.

Regarding claim 1, Sinofsky discloses a method of bonding a first tissue to a second tissue (col. 2, ll. 53-57). The method comprises the steps of placing the first tissue in proximity of the second tissue; providing an adhesive in contact with the first and second tissues (col. 2, ll. 57-61); and exposing the adhesive to electromagnetic radiation (col. 3, ll. 23-29; col. 4, ll. 15-19). The adhesive includes a derivatized collagen liquid, gel, or solid (col. 2, ll. 58-61).

Regarding claim 2, Sinofsky discloses a method wherein the electromagnetic radiation includes infrared light (col. 4, ll. 15-19: "wavelength range from about 1.4 micrometers to about 2.5 micrometers"). Infrared wavelength is from about  $7 \times 10^{-7}$  m to  $1 \times 10^{-3}$  m.

Regarding claim 3, Sinofsky discloses a method wherein the exposing step includes the step of directing light generated by a laser to the adhesive (col. 3, ll. 23-29).

3. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,749,895 to Sawyer et al.

Regarding claim 1, Sawyer et al. disclose a method of bonding a first tissue to a second tissue (col. 2, ll. 39-49). The method comprises the steps of placing the first tissue in proximity of the second tissue; providing an adhesive in contact with the first and second tissues (col. 1, ll. 45-49); and exposing the adhesive to electromagnetic radiation (col. 2, ll. 50-55; col. 3, ll. 9-15). The adhesive includes a derivatized collagen liquid, gel, or solid (col. 1, ll. 45-49).

Regarding claim 5, Sawyer et al. disclose a method further comprising the step of providing a material including cyanoacrylate in contact with at least one of the first and second tissues (col. 11, ll. 16-18).

*Claim Rejections – 35 U.S.C. 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,292,362 to Bass et al. in view of U.S. Patent No. 5,662,643 to Kung et al.

Regarding claim 4, Bass et al. disclose a method of bonding a first tissue to a second tissue, using a collagen adhesive and exposing the adhesive to electromagnetic radiation, but Bass et al. do not disclose a method further comprising the steps of monitoring the temperature of the surface of the liquid, gel, or solid and adjusting the intensity of the electromagnetic radiation in response to the monitored temperature. Kung et al. disclose a similar method wherein tissue is bonded together using a protein bonding agent and laser welding the agent (col. 4, ll. 25-33). Kung et al. further disclose the method comprising monitoring the temperature of the liquid, gel, or solid and adjusting the intensity of the electromagnetic radiation (col. 4, ll. 34-59). This is advantageous because it monitors the welding of the tissue in a simpler manner than relying on exposure time and power setting, and prevents damage to the tissue (col. 1, ll. 31-38). It would have been obvious to one having ordinary skill in the art at the time of the invention to include the temperature monitoring and adjustment system of Kung et al. to the method of Bass et al. so that welding can be performed without considerable experience and without damaging the skin.

Art Unit: 3731

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,547,794 B2 to Auge, II

U.S. Patent No. 5,895,412 to Tucker

U.S. Patent No. 5,791,352 to Reich et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwen Phaniijphand whose telephone number is 703-305-4845. The examiner can normally be reached on Mon-Fri.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Milano can be reached on 703-308-2496. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3590 for regular communications and 703-305-3590 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

GP  
April 28, 2003

GP

Gwen Phaniijphand  
Patent Examiner  
Art Unit 3731

  
Michael J. Milano  
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